

RD29180-2

REMARKS

Claims 1-17 and 36-42 are pending in the present Application. No claims have been cancelled, amended, or added. Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

Claims 1, 7-11, 14-17, and 38 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,916,632 to Mishina et al., while Claims 2-6, 12-13, 37, and 42 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mishina et al. Applicants respectfully traverse these rejections.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Mishina et al. teach a polyimide varnish that comprises polyimide in an organic solvent comprising from 5 wt% to 60 wt% of a propylene glycol derivative, in combination with another solvent "that is not particularly limited". (Col. 3, line 48 – Col. 4, line 15)

Of the entire solvent constituting the polyimide varnish of the present invention, *the solvent other than the above-described propylene glycol derivative is not particularly limited so long as it is capable of dissolving the polyimide and/or the polyimide precursor*. For example, it may be 2-pyrrolidone, N-methylpyrrolidone, N,N-dimethylacetamide, N,N- dimethylformamide, dimethylsulfoxide, hexamethylphosphoramide or γ -butyrolactone.

With the above information, the Examiner contends that "each of which has a boiling point in the claimed range, a polarity index of greater than or equal to about 4.0, and a pH in the range of 5.5 - 9, as evidenced by the Applicant's own specification and dependent Claim 9". (Final Rejection, Page 4). Applicants respectfully disagree with this interpretation of the present specification and claims, and disagree that there is any teaching, suggestion, or evidence that the solvent of Mishina et al. meets these elements.

Applicants note that Claim 1 specifies that "*the solution solvent* has a boiling point at atmospheric pressure of about 110°C to about 250°C, a polarity index of greater than or equal to about 4.0, and a pH of about 5.5 to about 9". Neither the specification nor the claims of the present application state that a solvent comprising 5 wt% to 60 wt% propylene glycol and 2-pyrrolidone, N-methylpyrrolidone, N,N-dimethylacetamide, N,N- dimethylformamide,

RD29180-2

dimeethylsulfoxide, hexamethylphosphoramide or γ -butyrolactone, has any particular properties. There is no support in Mishina et al. that the solvent of Mishina et al. meets the claimed ranges of the present Claim 1. Mishina et al., at best, have a mixture, and the properties of Mishina et al.'s mixture is not discussed. There is further no support in Mishina et al. with respect to the number of asperities in a final coating using their varnish. The present application does not teach that a solvent comprising one of above materials, in combination with any other material (e.g., polypropylene glycol, at any concentration, will have the claimed properties.

The present application claims a spin coating process. The process uses a solvent solution having a boiling point at atmospheric pressure of about 110°C to about 250°C, a polarity index of greater than or equal to about 4.0, and a pH of about 5.5 to about 9. The Final Rejection fails to provide support in Mishina et al. that the solvent in Mishina et al. meets these properties, or that the resultant coating meets the claimed properties.

Applicants further note, if it is alleged that the solvent properties and/or the coating properties are inherent, inherency requires that the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. No such basis has been provided. Additionally, inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Continental Can Co. v. Monsanto*, 948 F.2d 1264, 1269 (Fed. Cir. 1991).

Regarding Claims 10, 14, and 16, these claims teach specific amounts of various materials, e.g., halogens, particles, and water. As is correctly noted by the Examiner, these claims "are broad enough to read on 0 wt% halogens, 0 wt% particles, and 0 wt% water." It is further noted, that these claims limit the amounts of these materials that can be present in the solvent. Hence, a teaching of "a large excess of water", teaches away from Claim 16, for example. Regarding Mishina et al., they fail to teach less than or equal to about 1 wt% halogens, less than or equal to about 0.1 wt% particles having a diameter of greater than or equal to about 0.05 micrometers, and fail to teach less than or equal to about 0.5 wt% water, as is taught and claimed in the present invention. The Office Action contends that "the solvents listed above do not comprise halogens, nor does the coating solution comprise the claimed particles or water".

RD29180-2

(Final Rejection, page 4) However, there is not teaching or support provided for limiting the amount of these materials that can be present.

Regarding Claim 11, it is alleged that "Meshina et al. must necessarily have the claimed dielectric constant since the solvents taught by Meshina et al. are among the solvents disclosed in the specification." Applicants note that the present claims require the "solvent" to have particular properties, not merely a component of the solvent. Meshina et al. require their solvent to comprise a polypropylene glycol derivative. In addition to this derivative, the solvent "is not particularly limited so long as it is capable of dissolving the polyimide...". (Col. 4, lines 6 - 10) The mere fact that *a portion* of the solvent of Meshina et al. may comprise a solvent claimed in the present application does not teach, or support a position that the *whole solvent* of Meshina et al., i.e., the polypropylene glycol derivative plus the "other material, has the properties claimed in the present application. There is no basis for this position in fact or technical reasoning. There is no support that the properties are necessarily present in the *entire* solvent of Meshina et al. There is no support that the solvent of Meshina et al. necessarily has the claimed dielectric constant.

Regarding the properties and composition of the thermoplastic polymer claimed in Claims 2 - 6 and 42, there is no teaching or suggestion in Meshina et al. as to these claim elements. MPEP 2144.05 states that "'where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.'" However, the Examiner has not shown that "general conditions of a claim are disclosed in the prior art". The parameters and compositions claimed which attain the claimed properties are not mere optimization or routine experimentation. This is supported, for example, in Meshina et al. Meshina et al. contend that changes in the solvent have significant effects on the result of the coating: "[t]he obtained coating film had fine irregularities... on the surface, and it was impossible to obtain a smooth film." (Col. 6, lines 10 - 12, 23 - 25, 36 - 39, and 46 - 48; emphasis added) Applicants further contend that requiring a viscosity change of a particular amount after a heating process is not a cause effective variable or mere optimization.

Since Meshina et al. fail to teach several elements of the present claims, such as the properties of the solvent employed in the present claims, they fail to anticipate the present claims. Reconsideration and withdrawal of this rejection are respectfully requested.

R1D29180-2

Claim 39 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mishina et al. in view of U.S. Patent No. 6,715,200 to Feist et al. and further in view of U.S. Patent No. 5,055,631 to Sartori et al. Claim 40 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mishina et al. in view of Feist et al. and further in view of Japanese Patent Abstract 1991-017337 to Kageyama et al. Claim 41 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mishina et al. in view of Feist et al. and further in view of Sawaoka et al. and U.S. Patent No. 4,842,740 to Chung et al. Applicants respectfully traverse these rejections.

Applicants first note that the claim is nonobvious as described in detail above. Basically, Mishina et al. fail to teach the elements of the claims for which Mishina et al. are relied upon. Hence, even combined as suggested in the Office Action, these references fail to render the present claims obvious.

It is further noted that this rejection is improper since Feist et al. is not a proper reference. 35 U.S.C. §103(c) states:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (c), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Feist et al., which is commonly assigned with the present application to General Electric Company, only qualifies as prior art under 35 U.S.C. §102(c) since it published February 21, 2002, and the present application has a filing date of April 18, 2002, and a priority date of April 19, 2001.

Reconsideration and withdrawal of these rejections are respectfully requested.

RD29180-2

It is believed that the foregoing amendments and remarks fully comply with the Final Rejection and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the rejections and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP


By Pamela J. Curbelo
Pamela J. Curbelo
Registration No. 34,676

Date: May 12, 2005
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No.: 23413